

### **ABSTRACT OF THE INVENTION**

A card (document or instrument) embodying the invention includes a pattern formed between the top and bottom surfaces of the card, whereby the card, when illuminated by a light source, produces a unique output light pattern which can be detected by a photo sensor. The formed pattern may take any number of different shapes ranging from stripes of different size and spacing, as in a bar code, to complex two dimensional shapes and images. The pattern formed between the top and bottom surfaces of a card may include light pipes (paths) extending from one side of a card to one, or more, other side(s) of the card. Alternatively, the pattern formed between the top and bottom surfaces may include a bundle of optical fibers extending from one side of a card to one, or more, of the other sides of the card. Alternatively, the pattern formed between the top and bottom surfaces of the card may include light pipes or optical fibers extending "vertically" between these two surfaces. Alternatively, an image may be embedded between the top and bottom surfaces.

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